



Report To:	Manitoulin-Sudbury District Services Board
From:	Michael Maclsaac Chief of EMS
Date:	June 25, 2015
Re:	EMS Staffing Enhancement Results – Progress Report

Recommendation

That the Board receive this report as an analysis of recent changes in staffing at the EMS stations have affected the communities they service.

Report

Throughout the years enhancements have been made to staffing in the EMS stations. The following table details staffing enhancements over the years.

Station(s)	Year	Enhancement
Killarney	2006	Weekend staffing to on-site coverage from 24 hour on-call coverage
Foleyet	2008	Weekend staffing to on-site coverage from 24 hour on-call coverage
Hagar	2009	Evening on-site staffing from “closed” station
Mindemoya	2011	Evening on-site staffing 7 days a week from a hybrid model of 24 hours staffing on weekends
Massey/Noëlville	2014	20 hours on-site staffing 7 days a week from hybrid model of 24 hours staffing on weekends
Killarney/Foleyet/ Gogama	2015	10 hours on-site staffing 7 days a week from 8 hour/7 day a week staffing

Starting in 2011, following some ad hoc staffing enhancements and understanding that a more standardized approach for the future would be of benefit, the EMS Department made a concerted effort to evaluate the needs of the department in relation to staffing on a yearly basis with the release of 5 year staffing enhancement plans. Evaluations of readily available data were undertaken and proposed enhancements were submitted to the Board for review. Up until this year the main focus of these enhancements was on-

call staffing. On-site staffing is when a paramedic is being paid to be on duty at the EMS station. Under this staffing level the paramedics have a mandated “reaction” time of under 2 minutes for an emergency call. That means they have 2 minutes from the time they received the emergency page/alarm to be mobile in the ambulance. In an on-call staffing situation the paramedics are not on duty but rather are being paid a reduced on-call rate to carry a pager and be ready to return to work in the case of an emergency in under 10 minutes. This presents an obviously substantial difference in “reactions” times.

As time had progressed and understanding that these reports were driven by data it is important to evaluate the success of these enhancements.

Killarney 2006 & Foleyet 2008

The initial enhancements made in Foleyet and Killarney were essential to the communities. Prior to these enhancements staffing was performed from 8am on Saturday until 8 am on Monday by on-call staff. The norm up until this point was that the full time employees within the bases would cover the on-call weekends. Essentially what this meant was that the staff members were dedicated to the station 24 hours a day 7days a week. It became extremely difficult to maintain this level of staffing once the full time employees began not living within the communities. Faced with the option of either closing the stations on weekends or staffing the station with additional hours, the Board chose the latter.

A review of most recent reliable data (ZOLL EPCR 2011-2015) reveals that in Killarney 31.9% (152) of the calls in that station occur on the weekend and in Foleyet 24.4% (144) of the calls occur on weekends. Without any staffing at all within these communities these calls would be serviced by other communities in excess of one hour away.

Hagar 2009

Prior to 2009, staffing at the Hagar station included a 12 hour on-site day shift with zero staffing in the evening. Essentially the station was closed from 7pm to 7am. There were varying theories about potential changes to call volumes within the Sudbury East area prior to this change. The end data revealed the following in terms of call volumes.

Station	2007	2008	2009	2010
Noëlville	901	891	888	968
Hagar	604	785	1170	1034
Killarney	139	131	232	181

In 2009, the year of the change in staffing, there was a 49% increase in call volume in Hagar with essentially zero change in Noëlville. This increase while partially accounted for by deployment changes, would also be indicative of the level of service that was lacking within the Hagar catchment area during night time periods. From the period of January 1, 2011- March 31, 2015, 41% of the Hagar Station call volume occurred during the hours of 7pm and 7am; the hours not staffed prior to 2009.

Mindemoya 2011

The first of the formal enhancements occurred in Mindemoya in the fall of 2011. The enhancement to staffing in the Mindemoya station was prefaced on the fact that Mindemoya performed 127 calls in 2010 while on-call during 208 days of the year. That equates to being called for service on average 61% of the time when on-call. In other words being called for service when on-call became the norm not the exception.

Understanding the prior experience in Hagar suggested that a move to more staffing would create more calls for service the move to 24/7 on-site staffing was made in October 2011. A table in the updated 5 year staffing plan from 2013 revealed the positive impact that the enhancement to staffing in Mindemoya made. In comparison to data from 2010, when there was on-call in Mindemoya, there were increases in call volumes as follows:

Mindemoya	3 +/-		4 +/-	
	2011	2012	2011	2012
# Increase	37	49	85	85
% Increase	16%	53%	93%	93%

Currently, the Mindemoya station is on pace to average 1 call per night shift this year with a peak of 425 calls being performed on night shift in 2012.

Massey & Noëlville 2014

After a full year without any enhancement, staffing levels were increased in Massey and Noëlville in March of 2014. The move to a 20 hour on-site staffing model in Massey and Noëlville was made based on the fact that it would allow us to reach a greater number of patients during on-site hours. One year into this system a review of what would have been vs. what is currently the case can be reviewed. The following table depicts the differences in call volumes while on-call if no enhancement was made vs. the current staffing model from April 1, 2014 to March 31, 2015.

	Current Staffing	Former Staffing	Difference
Massey	52	129	+ 77
Noëlville	48	78	+ 30

Under the enhanced staffing model 107 calls for service were performed during on-site hours that would have been serviced while on-call under the former staffing level. Understanding the inherent potential difference in “reaction” times between on-site and on-call (2 vs. 10 minutes) the actual data reveals the following.

	On-Site Avg. “Reaction” Time (mm:ss)	On-Call Avg. “Reaction” Time (mm:ss)	Difference (mm:ss)
Massey	1:25	9:14	7:49
Noëlville	1:57	6:29	4:32

It could be suggested that we were able to save 10:01:48 in Massey and 2:06:00 in Noëlville because of the change in staffing levels in one year.

Killarney, Foleyet & Gogama 2015

The change in these 3 stations is quite recent taking place in March of this year. It is difficult to assess the full potential of the changes in these stations as they relate to call response, however there has been an increased benefit as predicted in terms of staffing. We have actually had a stable staffing complement in these stations for over a year now where in the past there has been a fair amount of staff turnover in these areas.

Conclusion

It is understood that the value of staffing levels must be measured against results. The Board has been very proactive in attempting to stay ahead of the curve when it comes to call volume increases. It is a known fact that the aging population in Ontario is placing strain on the healthcare system with a greater level of strain predicted for the future. Staying ahead of the potential up rise in call volumes on a gradual basis year after year is a safe and fiscally responsible way to maintain an appropriate level of services.

From the data above it is shown that the DSB is staying ahead of future risks and is actually providing a better, more responsive service to the citizens of its communities. It is evident from previous reports that response times as per the MOHLTC mandated Response Time Standard are not great, however we believe those measures to be quite urban centred with little room for error in a geographically challenged area such as ours. We also understand that without moving forward with suggestions for improvement our response times could be far worse with the future for emergency medical response to be far bleaker.

Continual review of performance in relation to response capabilities is ongoing. As new opportunities arise and more efficient way to operate become apparent we will advise the Board with the aim of providing the most economically responsible service possible.